

IN THE CLAIMS:

1. (Currently Amended) A breathing device, comprising:

a breathing gas circuit with a connected calcium hydroxide absorber cooled by an evaporating agent for flow of breathing gas through said calcium hydroxide absorber;

means for generating a gas volume flow of at least 60 L per minute separate from the flow of breathing gas with the gas flow being admitted to an outer surface of the calcium hydroxide absorber ~~and said outer surface also receiving said evaporating agent;~~ and

an evaporating agent delivery means for delivering said a liquid evaporating agent to the outer surface of the calcium hydroxide absorber, by admitted pressure, from an evaporating agent reservoir containing the liquid evaporating agent via at least one connection line whereby the outer surface receives the liquid evaporation agent and is cooled by said gas flow and said evaporating agent.

2. (Original) A breathing device in accordance with claim 1, wherein the outer surface of the calcium hydroxide absorber receiving the evaporating agent is provided with a hydrophilic fabric or nonwoven.

3. (Original) A breathing device in accordance with claim 1, wherein a gas volume flow of 150 L to 250 L per minute is admitted to the outer surface of said calcium hydroxide absorber by said means for generating a gas volume flow.

4. (Original) A breathing device in accordance with claim 1, wherein the gas delivery means is a positive displacement blower driven electrically or by compressed gas.

5. (Original) A breathing device in accordance with claim 1, wherein the breathing device is a gas mask or part of a gas mask system or a part of an anesthesia apparatus.

6. (Original) A breathing device in accordance with claim 1, wherein said evaporating agent delivery means includes an electrically or mechanically driven pump.

7. (Original) A breathing device in accordance with claim 1, wherein said evaporating agent delivery means comprises a pretensioned spring and said evaporating agent reservoir is provided with said pretensioned spring, so that the evaporating agent is delivered to the outer surface of the calcium hydroxide absorber by means of an admitted pressure.

8. (Original) A breathing device in accordance with claim 1, wherein the evaporating agent is water, a solution containing water or a mixture containing water.

9. (Original) A breathing device in accordance with claim 1, wherein the at least one said connection line between said evaporating agent reservoir and the outer surface of the calcium hydroxide absorber is provided with a porous or fibrous material.

10. (Original) A breathing device in accordance with claim 1, further comprising: a breathing bag, which can be inflated by the breathing gas, in gas flow connection with said breathing gas circuit, said breathing bag being mechanically or electromechanically connected with a pump of said evaporating agent delivery means, so that said pump is actuated as a function of respiratory activity and movement of the breathing bag.

11. (Original) A breathing device in accordance with claim 1, wherein said evaporating agent delivery means includes a media separation and pressure transmission means separating a high pressure fluid as a source of pressure from the evaporating agent to apply pressure on the evaporating agent to supply the evaporating agent.

12. (Original) A breathing device in accordance with claim 11, further comprising: a breathing bag, which can be inflated by the breathing gas, in gas flow connection with said breathing gas circuit, wherein said high pressure fluid of said media separation and pressure transmission means is gas in said breathing bag.

13. (Withdrawn) A breathing device in accordance with claim 11, further comprising: a pressurized gas reservoir, wherein said high pressure fluid of said media separation and pressure transmission means is gas in said pressurized gas reservoir.

14. (Withdrawn) A breathing device in accordance with claim 13, wherein said

pressurized gas reservoir is a high-pressure oxygen cylinder in regulated gas flow connection with said breathing gas circuit.

15. (Original) A breathing device in accordance with claim 11, wherein said media separation and pressure transmission means includes a piston and tank with said piston separating said high pressure fluid from said evaporating agent to apply pressure on the evaporating agent to supply the evaporating agent.

16. (Original) A breathing device in accordance with claim 11, wherein said media separation and pressure transmission means includes a high pressure fluid arrangement with a piston and cylinder or a bellows in fluid communication with said high pressure fluid and an evaporating agent fluid arrangement with a piston and cylinder or a bellows in fluid communication with said evaporating agent and further comprises a connecting element connecting said high pressure fluid arrangement with said evaporating agent fluid arrangement to apply pressure on the evaporating agent to supply the evaporating agent.

17. (Withdrawn) A breathing device in accordance with claim 11, wherein said media separation and pressure transmission means includes a tank with said membrane separating said high pressure fluid from said evaporating agent to apply pressure on the evaporating agent to supply the evaporating agent.

18. (Original) A breathing device in accordance with claim 1, wherein said calcium hydroxide absorber has the form of one or more parallelepipedic containers and of a container with an elliptical base, which are in gas flow connection.

19. (Original) A breathing device in accordance with claim 2, wherein said hydrophilic fabric or nonwoven is made of cotton or silk.

20. (Original) A breathing device in accordance with claim 1, wherein said evaporating agent delivery means includes a hose pump.

21. (Original) A breathing device in accordance with claim 1, wherein the at least one said connection line between said evaporating agent reservoir and the outer surface of the calcium hydroxide absorber is provided with cellulose acetate.

22. (Currently Amended) A breathing device, comprising:

a device housing with an absorber space connected to a cooling flow passage;

calcium hydroxide absorber disposed in said absorber space and having an outer surface;

a breathing gas circuit connected to said calcium hydroxide absorber for flow of

5 breathing gas through said calcium hydroxide absorber,

an evaporating agent reservoir,

an evaporating agent disposed in said reservoir in a liquid state;

a connection line;

an evaporating agent delivery device, delivering said evaporating agent in a liquid state

10 to the outer surface of the calcium hydroxide absorber by admitted pressure from said evaporating agent reservoir via said connection line; and

a flow generator, generating a cooling gas volume flow of at least 60 L per minute that is separate from said flow of breathing gas and is directed to an outer surface of the calcium hydroxide absorber via said cooling flow passage to evaporate said evaporating agent delivered
15 to said outer surface.

23. (Previously Presented) A breathing device in accordance with claim 22, further comprising a hydrophilic fabric or nonwoven provided at said outer surface of the calcium hydroxide absorber for receiving said evaporating agent via said connection line.

24. (Original) A breathing device in accordance with claim 22, wherein said flow generator is a positive displacement blower driven electrically or by compressed gas.

25. (Original) A breathing device in accordance with claim 22, wherein said evaporating agent delivery device comprises a pretensioned spring, said evaporating agent reservoir being provided with said pretensioned spring, so that the evaporating agent is delivered to the outer surface of the calcium hydroxide absorber by means of an admitted pressure.

26. (Original) A breathing device in accordance with claim 22, wherein the evaporating agent is water, a solution containing water or a mixture containing water and said connection line between said evaporating agent reservoir and the outer surface of the calcium hydroxide absorber is provided with a porous or fibrous material.

27. (Original) A breathing device in accordance with claim 22, further comprising: a breathing bag, which can be inflated by the breathing gas, in gas flow connection with said breathing gas circuit, said breathing bag being mechanically or electromechanically connected with a pump or said flow generator, whereby said pump is actuated as a function of respiratory activity and movement of the breathing bag.

28. (Original) A breathing device in accordance with claim 22, wherein said evaporating agent delivery device includes a media separation and pressure transmission device separating a high pressure fluid as a source of pressure from the evaporating agent to apply pressure on the evaporating agent to supply the evaporating agent.

29. (Original) A breathing device in accordance with claim 28, further comprising: a breathing bag, which can be inflated by the breathing gas, in gas flow connection with said breathing gas circuit, wherein said high pressure fluid of said media separation and pressure transmission device is gas in said breathing bag.

30. (Original) A breathing device in accordance with claim 28, further comprising: a pressurized gas reservoir, wherein said high pressure fluid of said media separation and pressure transmission device is gas in said pressurized gas reservoir.

31. (Original) A breathing device in accordance with claim 30, wherein said pressurized gas reservoir is a high-pressure oxygen cylinder in gas flow connection with said breathing gas circuit.

32. (Original) A breathing device in accordance with claim 28, wherein said media separation and pressure transmission device includes a piston and tank with said piston separating said high pressure fluid from said evaporating agent to apply pressure on the evaporating agent to supply the evaporating agent.

33. (Original) A breathing device in accordance with claim 32, wherein said media separation and pressure transmission device includes a high pressure fluid arrangement with a piston and cylinder or a bellows in fluid communication with said high pressure fluid and an evaporating agent fluid arrangement with a piston and cylinder or a bellows in fluid communication with said evaporating agent and further comprises a connecting element connecting said high pressure fluid arrangement with said evaporating agent fluid arrangement to apply pressure on the evaporating agent to supply the evaporating agent.

34. (Previously Presented) A breathing device in accordance with claim 28, wherein said media separation and pressure transmission device includes a tank with a membrane separating said high pressure fluid from said evaporating agent to apply pressure on the evaporating agent to supply the evaporating agent.

35. (Previously Presented) A breathing device in accordance with claim 1, wherein said calcium hydroxide absorber is parallelepipedic having a thickness dimension that is less than a height dimension and less than a width dimension to provide a substantially flat profile.

36. (Previously Presented) A breathing device in accordance with claim 28, wherein said calcium hydroxide absorber is parallelepipedic having a thickness dimension that is less than a height dimension and less than a width dimension to provide a substantially flat profile.

37. (Previously Presented) A breathing device, comprising:
a device housing with an absorber space connected to a cooling flow passage;
an absorber in said absorber space, said absorber having an outer surface and having an absorbent for removing CO₂ from breathing gas;

5 a breathing gas circuit connected to said absorber for the passage of breathing gas therethrough through said absorber, wherein heat is generated during a chemical reaction taking place between the CO₂ in the breathing gas and the absorbent;

a liquid reservoir;

a liquid in said reservoir;

10 liquid delivery means for delivering said liquid from said reservoir to said outer surface;
and

a gas flow generator for generating a gas volume flow directed to said outer surface and
separate from said breathing gas to evaporate the liquid delivered to said outer surface for
removing heat from said absorber.